# CS 340 – Project 2 - README

## Project Two: Grazioso Salvare – Animal Shelter DASH

This project was a culmination and test of the skills learned over the past eight weeks in CS-340. The project is a dash and mongo DB collaboration using python and Java to create a mockup of a functioning website for rescues. Due to the nature of python in that it is easily manipulatable with other languages as well as data sets, it made for the perfect language for working through this data. This Project serves as an assignment from Grazioso Salvare to the company Global Rain, whom I “work for”.

The Dash site is meant to display several species of dogs from local surrounding shelters in Texas that could be utilized and trained for different styles of rescues and first aids. Additionally, the Dash site displays the Geolocation of a pin for access to where animals are located.

The project had several specifications that had to be addressed for the site to be successful and useful to its commissioner. The website needed to be able to filter data interactively similar to a database, by water rescue, mountain rescue, disaster rescue or individual tracking, and a function to reset the options. Additionally, the project needed to include a dynamically updatable set of charts; geolocation and one of my choice, which happened to be a histogram for clearer depiction of numerical data. The commissioner also requested that my name be associated with the project as I developed it.

It is also important to note that for the purposes of training the animals, they needed to all fall within certain age ranges to be trained for the different rescue types. For water rescues research indicated that Labrador retriever Mix, Chesapeake Bay Retriever, and Newfoundland dogs between the ages of 26 to 156 weeks were the ideal candidates. For mountain or wilderness rescues, German shepherd, Alaskan Malamutes, Old, English Sheepdogs, Siberian Huskies, and Rottweilers between the ages of 26 to 156 weeks were prime candidates. For the last rescue, the age range and breed selections differed slightly as well, being that the Doberman Pinscher, German Shepherd, Golden Retriever, Bloodhound, and Rottweilers between the ages of 220 to 300 weeks were of ideal candidacy.

## Motivation

This project exists to serve as a reliable source of information for rescue workers and rescue animal trainers. Due to an ongoing need for animals that can assist and rescue people in various situations, Global Rain was hired to build the Dash site I have created for several purposes. For me, this project stands as a test of knowledge, fortitude, and the willingness to adapt and learn new things quickly while under a major time crunch.

## Getting Started

Getting started is simple if you follow the below steps!

1. Download the following files from the GitHub Repository:
   1. ProjectTwoDashboard(Final).ipynb
   2. Austin Animal Center Outcomes spreadsheet
   3. Animal\_shelter.py
   4. Grazioso Salvare Logo.png
2. In a virtual environment or in a Linux command shell, import the data set from the Austin Animal Center Outcomes spreadsheet.
3. Create an AAC user account and an admin account to access the data sets within the command shell.
4. In the program of your choice, load the .PY and the .IPYNB files.
5. Run the IPYNB file and open in new window the corresponding dash program.

## Usage

In this section I am going to identify its primary functions and uses in several screen shots.

1. The first Function I would like to display is the initial screen when you load in the completed project.

A picture containing table

Description automatically generated

* This Shows the Company’s logo, the filter options, my name, the data sets, geolocation table, and the histogram table.

1. The second function I would like to identify is the filtering options. These functions filter the results of the data set by the specifications allotted in paragraph four of the Project description.

Map

Description automatically generated

Chart, map

Description automatically generated

Chart

Description automatically generated

* Notice that the information dynamically changes based on the option.

## Graphical user interface, chart Description automatically generatedThe third function is the reset filter bringing it back to how it was displayed in the initial dashboard.

1. Graphical user interface, chart

   Description automatically generatedThe next function to highlight is the ability to highlight columns of data, individual data points on the data table, and more precise hover information with the histogram.

## Challenges

I struggled greatly with getting the virtual environment to function correctly, which ultimately was a case of it needing time to work itself out. Additionally, I struggled greatly for a large amount of time trying to internalize and understand the content. This material is complex and difficult, but with time, practice, and perseverance, achievable. Finally, a big struggle for me was the learning of different aspects of DASH and HTML overall. These came as a very fast approaching wall to which I still have a long way to go but am looking forward to learning more about it. Many of my problems were solved with copious amounts of googling and YouTube videos detailing dash, python, and mongo as a whole. This was an invaluable resource for me as I am a visual-Kinesthetic learner, meaning I need to observe something done while working through it in order to understand how to do it.

## Contact

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